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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,536	09/10/2003	Masaki Ueno	108419-00052	1952

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EXAMINER

NGUYEN, TU MINH

ART UNIT PAPER NUMBER

3748

DATE MAILED: 06/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/658,536

Applicant(s)

UENO ET AL.

Examiner

Tu M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office Action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Akazaki et al. (U.S. Patent 5,946,906).

Re claim 1, as shown in Figure 1, Akazaki et al. disclose an exhaust gas purifying apparatus for an internal combustion engine (10) for purifying exhaust gases discharged from the internal combustion engine, and temporarily adsorbing hydrocarbons within exhaust gases upon start of the internal combustion engine, the exhaust gas purifying apparatus comprising:

- a catalyzer (44) disposed in an exhaust system of the internal combustion engine for purifying exhaust gases;

- an adsorbent (74) filled in a second passage (56) in the exhaust system for adsorbing hydrocarbons within exhaust gases, the second passage (56) circumventing a first passage (38);

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- a switching valve (60) operable to switch between an open position for opening the first passage and a close position for closing the first passage;

- atmospheric pressure state detecting means (94) for detecting an atmospheric pressure state; and

- switching valve driving means (86) for driving the switching valve to the close position upon start of the internal combustion engine (lines 4-20 of column 7), and for driving the switching valve to the open position in accordance with the detected atmospheric pressure state (lines 40-51 of column 4).

Re claim 2, the apparatus of Akazaki et al. further comprises:

- start-time temperature state detecting means (86, 104) for detecting a temperature state of the exhaust system upon start of the internal combustion engine; and

- post-start exhaust gas calory calculating means (86, Figure 20) for calculating the calory of exhaust gases discharged after the start of the internal combustion engine,

wherein the switching valve driving means (86) drives the switching valve (60) to the open position in accordance further with the detected start-time temperature state of the exhaust system, and the calculated post-start exhaust gas calory.

3. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Watanabe et al. (U.S. Patent 6,321,533).

As shown in Figure 1, Watanabe et al. disclose an exhaust gas purifying apparatus for an internal combustion engine (12) for purifying exhaust gases discharged from the internal

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combustion engine, and temporarily adsorbing hydrocarbons within exhaust gases upon start of the internal combustion engine, the exhaust gas purifying apparatus comprising:

- a catalyzer (24) disposed in an exhaust system of the internal combustion engine for purifying exhaust gases;
- an adsorbent (31) filled in a second passage (30) in the exhaust system for adsorbing hydrocarbons within exhaust gases, the second passage (30) circumventing a first passage (27);
- a switching valve (28) operable to switch between an open position for opening the first passage and a close position for closing the first passage;
- atmospheric pressure state detecting means (46) for detecting an atmospheric pressure state; and
- switching valve driving means (10) for driving the switching valve to the close position upon start of the internal combustion engine (lines 30-38 of column 8), and for driving the switching valve to the open position in accordance with the detected atmospheric pressure state (lines 16-19 of column 2).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akazaki et al. as applied to claim 2 above, in view of Cullen et al. (U.S. Patent 5,746,049).

Re claim 3, the apparatus of Akazaki et al. discloses the invention as cited above, however, fails to disclose that the start-time temperature state detecting means estimates a start-time temperature state of the exhaust system based on a temperature of the exhaust system at a preceding stop of the engine and an inoperative time of the engine during this preceding stop.

As illustrated in Figures 1 and 5a, Cullen et al. teach a method to estimate a temperature of a catalyst (32) without the use of a catalyst temperature sensor by accounting for an inoperative time of an engine during a preceding stop. At step 204, the method determines and initializes a catalyst temperature based on an estimated temperature (ext_ntB_prev) of the catalyst at the preceding stop of the engine and an inoperative time (soaktime) of the engine during this stop (see line 55 of column 4 to line 18 of column 5). It would have been obvious to one having ordinary skill in the art at the time of the invention was made, to have utilized the method taught by Cullen et al. in the apparatus of Akazaki et al., since the use thereof would have saved cost by eliminating the catalyst temperature sensor (104).

Re claim 4, in the modified apparatus of Akazaki et al., the start-time temperature state detecting means further includes an ambient temperature detecting means for detecting the ambient temperature (infamb) around the internal combustion engine,

wherein the start-time temperature state detecting means is configured to find the start-time temperature state of the exhaust system in accordance further with the detected ambient temperature (see Cullen et al.: line 55 of column 4 to line 18 of column 5).

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Prior Art

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of three patents: Adamczyk et al. (U.S. Patent 5,524,433), Kadota (U.S. Patent 5,635,633), Tanaka et al. (U.S. Patent 5,765,369), and Tanaka et al. (U.S. Patent 5,956,947) further disclose a state of the art.

Communication

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tu Nguyen whose telephone number is (703) 308-2833.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas E. Denion, can be reached on (703) 308-2623. The fax phone number for this group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1148.

Tu M. Nguyen

TMN

Tu M. Nguyen

June 14, 2004

Patent Examiner

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